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SEQUENCE LISTING

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<120> CRYSTAL STRUCTURE OF ANGIOTENSIN-CONVERTING ENZYME-RELATED  
CARBOXYPEPTIDASE

<130> MNM/002

<140> 10/659,000  
<141> 2003-09-09

<150> 60/410,010  
<151> 2002-09-09

<160> 10

<170> PatentIn Ver. 3.2

<210> 1  
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
peptide

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Asp Arg Val Tyr Ile His Pro Phe His Leu  
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<210> 2  
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<213> Artificial Sequence

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peptide

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Asp Arg Val Tyr Ile His Pro Phe  
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<210> 3  
<211> 9  
<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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Asp Arg Val Tyr Ile His Pro Phe His  
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<211> 595

<212> PRT

<213> Homo sapiens

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Asn Thr Asn Ile Thr Glu Glu Asn Val Gln Asn Met Asn Asn Ala Gly  
35 40 45

Asp Lys Trp Ser Ala Phe Leu Lys Glu Gln Ser Thr Leu Ala Gln Met  
50 55 60

Tyr Pro Leu Gln Glu Ile Gln Asn Leu Thr Val Lys Leu Gln Leu Gln  
65 70 75 80

Ala Leu Gln Gln Asn Gly Ser Ser Val Leu Ser Glu Asp Lys Ser Lys  
85 90 95

Arg Leu Asn Thr Ile Leu Asn Thr Met Ser Thr Ile Tyr Ser Thr Gly  
100 105 110

Lys Val Cys Asn Pro Asp Asn Pro Gln Glu Cys Leu Leu Glu Pro  
115 120 125

Gly Leu Asn Glu Ile Met Ala Asn Ser Leu Asp Tyr Asn Glu Arg Leu  
130 135 140

Trp Ala Trp Glu Ser Trp Arg Ser Glu Val Gly Lys Gln Leu Arg Pro  
145 150 155 160

Leu Tyr Glu Glu Tyr Val Val Leu Lys Asn Glu Met Ala Arg Ala Asn  
165 170 175

His Tyr Glu Asp Tyr Gly Asp Tyr Trp Arg Gly Asp Tyr Glu Val Asn  
180 185 190

Gly Val Asp Gly Tyr Asp Tyr Ser Arg Gly Gln Leu Ile Glu Asp Val  
195 200 205

Glu His Thr Phe Glu Glu Ile Lys Pro Leu Tyr Glu His Leu His Ala  
210 215 220

Tyr Val Arg Ala Lys Leu Met Asn Ala Tyr Pro Ser Tyr Ile Ser Pro  
 225 230 235 240  
 Ile Gly Cys Leu Pro Ala His Leu Leu Gly Asp Met Trp Gly Arg Phe  
 245 250 255  
 Trp Thr Asn Leu Tyr Ser Leu Thr Val Pro Phe Gly Gln Lys Pro Asn  
 260 265 270  
 Ile Asp Val Thr Asp Ala Met Val Asp Gln Ala Trp Asp Ala Gln Arg  
 275 280 285  
 Ile Phe Lys Glu Ala Glu Lys Phe Phe Val Ser Val Gly Leu Pro Asn  
 290 295 300  
 Met Thr Gln Gly Phe Trp Glu Asn Ser Met Leu Thr Asp Pro Gly Asn  
 305 310 315 320  
 Val Gln Lys Ala Val Cys His Pro Thr Ala Trp Asp Leu Gly Lys Gly  
 325 330 335  
 Asp Phe Arg Ile Leu Met Cys Thr Lys Val Thr Met Asp Asp Phe Leu  
 340 345 350  
 Thr Ala His His Glu Met Gly His Ile Gln Tyr Asp Met Ala Tyr Ala  
 355 360 365  
 Ala Gln Pro Phe Leu Leu Arg Asn Gly Ala Asn Glu Gly Phe His Glu  
 370 375 380  
 Ala Val Gly Glu Ile Met Ser Leu Ser Ala Ala Thr Pro Lys His Leu  
 385 390 395 400  
 Lys Ser Ile Gly Leu Leu Ser Pro Asp Phe Gln Glu Asp Asn Glu Thr  
 405 410 415  
 Glu Ile Asn Phe Leu Leu Lys Gln Ala Leu Thr Ile Val Gly Thr Leu  
 420 425 430  
 Pro Phe Thr Tyr Met Leu Glu Lys Trp Arg Trp Met Val Phe Lys Gly  
 435 440 445  
 Glu Ile Pro Lys Asp Gln Trp Met Lys Lys Trp Trp Glu Met Lys Arg  
 450 455 460  
 Glu Ile Val Gly Val Val Glu Pro Val Pro His Asp Glu Thr Tyr Cys  
 465 470 475 480  
 Asp Pro Ala Ser Leu Phe His Val Ser Asn Asp Tyr Ser Phe Ile Arg  
 485 490 495  
 Tyr Tyr Thr Arg Thr Leu Tyr Gln Phe Gln Phe Glu Ala Leu Cys  
 500 505 510  
 Gln Ala Ala Lys His Glu Gly Pro Leu His Lys Cys Asp Ile Ser Asn  
 515 520 525

Ser Thr Glu Ala Gly Gln Lys Leu Phe Asn Met Leu Arg Leu Gly Lys  
 530 535 540  
 Ser Glu Pro Trp Thr Leu Ala Leu Glu Asn Val Val Gly Ala Lys Asn  
 545 550 555 560  
 Met Asn Val Arg Pro Leu Leu Asn Tyr Phe Glu Pro Leu Phe Thr Trp  
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 Leu Lys Asp Gln Asn Lys Asn Ser Phe Val Gly Trp Ser Thr Asp Trp  
 580 585 590  
 Ser Pro Tyr  
 595

<210> 5  
 <211> 587  
 <212> PRT  
 <213> Homo sapiens

<400> 5  
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 Asn Thr Asn Ile Thr Thr Glu Thr Ser Lys Ile Leu Leu Gln Lys Asn  
 35 40 45  
 Met Gln Ile Ala Asn His Thr Leu Lys Tyr Gly Thr Gln Ala Arg Lys  
 50 55 60  
 Phe Asp Val Asn Gln Leu Gln Asn Thr Thr Ile Lys Arg Ile Ile Lys  
 65 70 75 80  
 Lys Val Gln Asp Leu Glu Arg Ala Ala Leu Pro Ala Gln Glu Leu Glu  
 85 90 95  
 Glu Tyr Asn Lys Ile Leu Leu Asp Met Glu Thr Thr Tyr Ser Val Ala  
 100 105 110  
 Thr Val Cys His Pro Asn Gly Ser Cys Leu Gln Leu Glu Pro Asp Leu  
 115 120 125  
 Thr Asn Val Met Ala Thr Ser Arg Lys Tyr Glu Asp Leu Leu Trp Ala  
 130 135 140  
 Trp Glu Gly Trp Arg Asp Lys Ala Gly Arg Ala Ile Leu Gln Phe Tyr  
 145 150 155 160  
 Pro Lys Tyr Val Glu Leu Ile Asn Gln Ala Ala Arg Leu Asn Gly Tyr  
 165 170 175  
 Val Asp Ala Gly Asp Ser Trp Arg Ser Met Tyr Glu Thr Pro Ser Leu  
 180 185 190

Glu Gln Asp Leu Glu Arg Leu Phe Gln Glu Leu Gln Pro Leu Tyr Leu  
 195 200 205  
 Asn Leu His Ala Tyr Val Arg Arg Ala Leu His Arg His Tyr Gly Ala  
 210 215 220  
 Gln His Ile Asn Leu Glu Gly Pro Ile Pro Ala His Leu Leu Gly Asn  
 225 230 235 240  
 Met Trp Ala Gln Thr Trp Ser Asn Ile Tyr Asp Leu Val Val Pro Phe  
 245 250 255  
 Pro Ser Ala Pro Ser Met Asp Thr Thr Glu Ala Met Leu Lys Gln Gly  
 260 265 270  
 Trp Thr Pro Arg Arg Met Phe Lys Glu Ala Asp Asp Phe Phe Thr Ser  
 275 280 285  
 Leu Gly Leu Leu Pro Val Pro Pro Glu Phe Trp Asn Lys Ser Met Leu  
 290 295 300  
 Glu Lys Pro Thr Asp Gly Arg Glu Val Val Cys His Ala Ser Ala Trp  
 305 310 315 320  
 Asp Phe Tyr Asn Gly Lys Asp Phe Arg Ile Lys Gln Cys Thr Thr Val  
 325 330 335  
 Asn Leu Glu Asp Leu Val Val Ala His His Glu Met Gly His Ile Gln  
 340 345 350  
 Tyr Phe Met Gln Tyr Lys Asp Leu Pro Val Ala Leu Arg Glu Gly Ala  
 355 360 365  
 Asn Pro Gly Phe His Glu Ala Ile Gly Asp Val Leu Ala Leu Ser Val  
 370 375 380  
 Ser Thr Pro Lys His Leu His Ser Leu Asn Leu Leu Ser Ser Glu Gly  
 385 390 395 400  
 Gly Ser Asp Glu His Asp Ile Asn Phe Leu Met Lys Met Ala Leu Asp  
 405 410 415  
 Lys Ile Ala Phe Ile Pro Phe Ser Tyr Leu Val Asp Gln Trp Arg Trp  
 420 425 430  
 Arg Val Phe Asp Gly Ser Ile Thr Lys Glu Asn Tyr Asn Gln Glu Trp  
 435 440 445  
 Trp Ser Leu Arg Leu Lys Tyr Gln Gly Leu Cys Pro Pro Val Pro Arg  
 450 455 460  
 Thr Gln Gly Asp Phe Asp Pro Gly Ala Lys Phe His Ile Pro Ser Ser  
 465 470 475 480  
 Val Pro Tyr Ile Arg Tyr Phe Val Ser Phe Ile Ile Gln Phe Gln Phe  
 485 490 495

His Glu Ala Leu Cys Gln Ala Ala Gly His Thr Gly Pro Leu His Lys  
 500 505 510  
 Cys Asp Ile Tyr Gln Ser Lys Glu Ala Gly Gln Arg Leu Ala Thr Ala  
 515 520 525  
 Met Lys Leu Gly Phe Ser Arg Pro Trp Pro Glu Ala Met Gln Leu Ile  
 530 535 540  
 Thr Gly Gln Pro Asn Met Ser Ala Ser Ala Met Leu Ser Tyr Phe Lys  
 545 550 555 560  
 Pro Leu Leu Asp Trp Leu Arg Thr Glu Asn Glu Leu His Gly Glu Lys  
 565 570 575  
 Leu Gly Trp Pro Gln Tyr Asn Trp Thr Pro Asn  
 580 585

<210> 6  
 <211> 587  
 <212> PRT  
 <213> Homo sapiens

<400> 6  
 Val Thr Asp Glu Ala Glu Ala Ser Lys Phe Val Glu Glu Tyr Asp Arg  
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 Thr Ser Gln Val Val Trp Asn Glu Tyr Ala Glu Ala Asn Trp Asn Tyr  
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 Asn Thr Asn Ile Thr Thr Glu Thr Ser Lys Ile Leu Leu Gln Lys Asn  
 35 40 45  
 Met Gln Ile Ala Asn His Thr Leu Lys Tyr Gly Thr Gln Ala Arg Lys  
 50 55 60  
 Phe Asp Val Asn Gln Leu Gln Asn Thr Thr Ile Lys Arg Ile Ile Lys  
 65 70 75 80  
 Lys Val Gln Asp Leu Glu Arg Ala Ala Leu Pro Ala Gln Glu Leu Glu  
 85 90 95  
 Glu Tyr Asn Lys Ile Leu Leu Asp Met Glu Thr Thr Tyr Ser Val Ala  
 100 105 110  
 Thr Val Cys His Pro Asn Gly Ser Cys Leu Gln Leu Glu Pro Asp Leu  
 115 120 125  
 Thr Asn Val Met Ala Thr Ser Arg Lys Tyr Glu Asp Leu Leu Trp Ala  
 130 135 140  
 Trp Glu Gly Trp Arg Asp Lys Ala Gly Arg Ala Ile Leu Gln Phe Tyr  
 145 150 155 160  
 Pro Lys Tyr Val Glu Leu Ile Asn Gln Ala Ala Arg Leu Asn Gly Tyr  
 165 170 175

Val Asp Ala Gly Asp Ser Trp Arg Ser Met Tyr Glu Thr Pro Ser Leu  
 180 185 190  
 Glu Gln Asp Leu Glu Arg Leu Phe Gln Glu Leu Gln Pro Leu Tyr Leu  
 195 200 205  
 Asn Leu His Ala Tyr Val Arg Arg Ala Leu His Arg His Tyr Gly Ala  
 210 215 220  
 Gln His Ile Asn Leu Glu Gly Pro Ile Pro Ala His Leu Leu Gly Asn  
 225 230 235 240  
 Met Trp Ala Gln Thr Trp Ser Asn Ile Tyr Asp Leu Val Val Pro Phe  
 245 250 255  
 Pro Ser Ala Pro Ser Met Asp Thr Thr Glu Ala Met Leu Lys Gln Gly  
 260 265 270  
 Trp Thr Pro Arg Arg Met Phe Lys Glu Ala Asp Asp Phe Phe Thr Ser  
 275 280 285  
 Leu Gly Leu Leu Pro Val Pro Pro Glu Phe Trp Asn Lys Ser Met Leu  
 290 295 300  
 Glu Lys Pro Thr Asp Gly Arg Glu Val Val Cys His Ala Ser Ala Trp  
 305 310 315 320  
 Asp Phe Tyr Asn Gly Lys Asp Phe Arg Ile Lys Gln Cys Thr Thr Val  
 325 330 335  
 Asn Leu Glu Asp Leu Val Val Ala His His Glu Met Gly His Ile Gln  
 340 345 350  
 Tyr Phe Met Gln Tyr Lys Asp Leu Pro Val Ala Leu Arg Glu Gly Ala  
 355 360 365  
 Asn Pro Gly Phe His Glu Ala Ile Gly Asp Val Leu Ala Leu Ser Val  
 370 375 380  
 Ser Thr Pro Lys His Leu His Ser Leu Asn Leu Leu Ser Ser Glu Gly  
 385 390 395 400  
 Gly Ser Asp Glu His Asp Ile Asn Phe Leu Met Lys Met Ala Leu Asp  
 405 410 415  
 Lys Ile Ala Phe Ile Pro Phe Ser Tyr Leu Val Asp Gln Trp Arg Trp  
 420 425 430  
 Arg Val Phe Asp Gly Ser Ile Thr Lys Glu Asn Tyr Asn Gln Glu Trp  
 435 440 445  
 Trp Ser Leu Arg Leu Lys Tyr Gln Gly Leu Cys Pro Pro Val Pro Arg  
 450 455 460  
 Thr Gln Gly Asp Phe Asp Pro Gly Ala Lys Phe His Ile Pro Ser Ser  
 465 470 475 480

Val Pro Tyr Ile Arg Tyr Phe Val Ser Phe Ile Ile Gln Phe Gln Phe  
485 490 495

His Glu Ala Leu Cys Gln Ala Ala Gly His Thr Gly Pro Leu His Lys  
500 505 510

Cys Asp Ile Tyr Gln Ser Lys Glu Ala Gly Gln Arg Leu Ala Thr Ala  
515 520 525

Met Lys Leu Gly Phe Ser Arg Pro Trp Pro Glu Ala Met Gln Leu Ile  
530 535 540

Thr Gly Gln Pro Asn Met Ser Ala Ser Ala Met Leu Ser Tyr Phe Lys  
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Pro Leu Leu Asp Trp Leu Arg Thr Glu Asn Glu Leu His Gly Glu Lys  
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Leu Gly Trp Pro Gln Tyr Asn Trp Thr Pro Asn  
580 585

<210> 7  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 7  
Arg Pro Pro Gly Phe Ser Pro Phe Arg  
1 5

<210> 8  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
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Tyr Gly Gly Phe Leu  
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<210> 9  
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<212> PRT  
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<210> 10  
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<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 10  
Asp Arg Val Tyr Ile  
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